characterized in that a control arrangement is provided which is connected to tile means for deflection of the particle beam and the means for evaluation of the detector signal can be controlled in such a way that the location of the emitted secondary particles relative to the position of the detector is taken into consideration during the evaluation of the detector signal.

45. (New) An apparatus according to claim 44, characterized in that a movable table is provided for retaining the substrate.

REMARKS

This is intended as a full and complete response to the Final Office Action dated September 10, 2002, having a shortened statutory period for response set to expire on December 10, 2002. Please reconsider the claims pending in the application for reasons discussed below.

Claims 15-30 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over *Meisburger* (5,665,968).

Applicants propose amending claim 15 to include the limitations of claim 16 and have canceled claim 16. Applicants propose amending claim 15 to more clearly illustrate the phrase "directing a particle beam onto said substrate in such manner as to cause secondary particles to be emitted from any selected one of a plurality of sites on said substrate." Applicants submit that the changes made herein do not introduce new matter.

The Examiner states that *Meisburger* discloses the basic apparatus of the Applicants' invention, including means for directing a beam along a path to one of a plurality of possible sites, via deflector means. Applicants submit that there is no teaching or suggestion in *Meisburger* that the deflectors direct a beam along a path to one of a plurality of possible sites. *Meisburger* describes the deflection of the beam as "largely free of distortion and is substantially perpendicular to the surface, so that the image characteristics are uniform over the scan field" (column 9, lines 2-3). *Meisburger*

only describes scanning a very small field, such as a field having a width of 100 μm. In contrast, the present application shows and describes deflecting a beam such that particles will be emitted from distinct sites, and thus, a large area, such as an area having a diameter of 30 cm, can be scanned. Therefore, Applicants submit that *Meisburger* does not teach, show, or suggest a method of testing a substrate comprising directing a particle beam onto said substrate in such manner as to cause secondary particles to be emitted from any selected one of a plurality of sites on said substrate, wherein the directing a particle beam includes deflecting said particle beam from one selected site to another, guiding at least some of the secondary particles from said one selected site to a signal detector spaced from said one selected site, generating signals in response to the detection of the detected secondary particles, said generated signals having values which vary in responses to changes in the space between said detector and different ones of said selected sites, and comparing the respective signals produced in response to the detection of said detected secondary particles from each of said selected sites with a selected predetermined reference signal, as recited in proposed claim 15. Applicants further submit that the references of record do not teach, show, or suggest a method of testing a substrate comprising directing a particle beam onto said substrate in such manner as to cause secondary particles to be emitted from any selected one of a plurality of sites on said substrate, wherein the directing a particle beam includes deflecting said particle beam from one selected site to another, guiding at least some of the secondary particles from said one selected site to a signal detector spaced from said one selected site, wherein at least some of said emitted secondary particles are guided directly from said one selected site to said detector, generating signals in response to the detection of the detected secondary particles, said generated signals having values which vary in responses to changes in the space between said detector and different ones of said selected site, and comparing the respective signals produced in response to the detection of said detected secondary particles from each of said selected sites with a selected predetermined reference signal, as recited in claim 21, which includes the limitations of proposed claim 15. Applicants respectfully request withdrawal of the rejection of claims 15 and 17-25.

Applicants propose amending claim 26 to include the limitations of claim 28 and hav canceled claim 28. Applicants submit that the changes made herein do not introduce new matter.

As discussed above, Applicants submit that *Meisburger* does not teach or suggest deflecting a beam from one of several selected sites to another of several selected sites. Thus, Applicants submit that *Meisburger* does not teach, show, or suggest apparatus for testing a substrate comprising means for producing a particle beam, means for directing said beam along a first path to a selected one of a plurality of sites on said substrate whereby secondary particles are produced and emitted along a second path by said substrate at said selected one of said sites, means for deflecting said particle beam from said one of said selected sites to another of said selected sites, secondary particle detecting means spaced from said selected one of said sites, means for guiding secondary particles from said selected one of said sites to said detector means, said detector means being operable to generate a signal having a value which varies in response to differences in the space between said detector and said selected one of said sites, and means for comparing the respective signals produced in response to the detection of said detected secondary particles from each of said selected sites with a selected predetermined reference signal, as recited in proposed claim 26. Applicants respectfully request withdrawal of the rejection of claims 26, 27, and 29-30.

Applicants propose adding new claims 31-45 to more clearly illustrate the claimed subject matter. Applicants submit that the changes made herein do not introduce new matter. Applicants submit that new claims 31-45 are distinguishable over the art of record, as all of the new claims include either 1) means for guiding secondary particles from the substrate to the detector, wherein the means are formed of a plurality of plate-shaped deflection electrodes, and are controlled as a function of the location (x_1, x_2) of the emitted secondary particles relative to the position of the detector, and whereby the means for guiding the secondary particles are located below the detector or 2) means for evaluation of a detector signal that can be controlled in such a way that the location of the emitted secondary particles relative to the position of the detector is taken into consideration during the evaluation of the detector signal. Applicants respectfully request entry and consideration of new claims 31-45.

In conclusion, the reference cited by the Examiner does not teach, show, or suggest the method or apparatus of the present invention. Having addressed all issues set out in the office action, Applicants respectfully submit that the claims are in condition for allowance and respectfully request that the claims be allowed.

Respectfully submitted,

Keith M. Tackett
Registration No. 32,008
MOSER, PATTERSON & SHERIDAN, L.L.P.
3040 Post Oak Blvd., Suite 1500
Houston, TX 77056
Telephone: (713) 623-4844
Facsimile: (713) 623-4846
Attorney for Applicant(s)

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VERSION WITH MARKINGS TO SHOW CHANGES MADE

15. (Amended) A method of testing a substrate comprising:

directing a particle beam onto said substrate in such manner as to cause secondary particles to be emitted from any selected one of a plurality of sites on said substrate, wherein the directing a particle beam includes deflecting said particle beam from one selected site to another;

guiding at least some of the secondary particles from said one selected site to a signal detector spaced from said one selected site;

generating signals in response to the detection of the detected secondary particles, said generated signals having values which vary in response to changes in the space between said detector and different ones of said selected sites; and

comparing the respective signals produced in response to the detection of said detected secondary particles from each of said selected sites with a selected predetermined reference signal.

26. (Amended) Apparatus for testing a substrate comprising:

means for producing a particle beam;

means for directing said beam along a first path to a selected one of a plurality of sites on said substrate whereby secondary particles are produced and emitted along a second path by said substrate at said selected one of said sites;

means for deflecting said particle beam from said one of said selected sites to another of said selected sites;

secondary particle detecting means spaced from said selected one of said sites;

means for guiding secondary particles from said selected one of said sites to said detector means, said detector means being operable to generate a signal having a value which varies in response to differences in the space between said detector and said selected one of said sites; and

means for comparing the respective signals produced in response to the detection of said detected secondary particles from each of said selected sites with a selected predetermined reference signal.